**FOXJ1 Monoclonal Antibody (2A5), eBioscience™**

**Catalog Number:** 14-9965-82

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**Details**

<table>
<thead>
<tr>
<th>Size</th>
<th>100 µg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host/Isotope</td>
<td>Mouse / IgG1</td>
</tr>
<tr>
<td>Class</td>
<td>Monoclonal</td>
</tr>
<tr>
<td>Type</td>
<td>Antibody</td>
</tr>
<tr>
<td>Clone</td>
<td>2A5</td>
</tr>
<tr>
<td>Conjugate</td>
<td>Unconjugated</td>
</tr>
<tr>
<td>Form</td>
<td>Liquid</td>
</tr>
<tr>
<td>Concentration</td>
<td>0.5 mg/mL</td>
</tr>
<tr>
<td>Purification</td>
<td>Affinity chromatography</td>
</tr>
<tr>
<td>Storage buffer</td>
<td>PBS, pH 7.2</td>
</tr>
<tr>
<td>Contains</td>
<td>0.09% sodium azide</td>
</tr>
<tr>
<td>Storage Conditions</td>
<td>4° C</td>
</tr>
</tbody>
</table>

**Species Reactivity**

- Tested species reactivity: Human, Mouse
- Published species reactivity: Mouse, Not Applicable

**Tested Applications**

- Immunocytochemistry (ICC)
- Immunofluorescence (IF)
- Immunohistochemistry (Paraffin) (IHC (P))
- Western Blot (WB)

**Dilution**

- Immunocytochemistry (ICC): Assay-Dependent
- Immunofluorescence (IF): Assay-Dependent
- Immunohistochemistry (Paraffin) (IHC (P)): 1-10 µg/mL
- Western Blot (WB): 1-10 µg/mL

**Published Applications**

- Immunofluorescence (IF): See 1 publications below
- Miscellaneous PubMed (MISC): See 3 publications below
- Western Blot (WB): See 1 publications below

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**Product specific information**

**Description:** This 2A5 monoclonal antibody reacts with Foxj1, a 50-kDa member of the Forkhead-box (FOX) family of winged-helix transcription factors. Expression of Foxj1 is high in ciliated epithelial cells and low in naive T and B cells, where cellular activation results in downregulation of the factor. Foxj1 modulates germinal center formation and Th1 activation by repressing NFκappaB through IkappaBbeta induction. As such, this transcription factor has been suggested to antagonize autoimmune reactions such as systemic lupus erythematosus and rheumatoid arthritis. In addition, Foxj1 has been linked to the formation of motile cilia in epithelial cells.

**Applications Reported:** This 2A5 antibody has been reported for use in western blotting, immunohistochemical staining of formalin-fixed paraffin embedded tissue sections, and immunocytochemistry.

**Applications Tested:** This 2A5 antibody has been tested by western blot of mouse tracheal epithelial cells and testes, as well as by immunohistochemistry of mouse lung tissue. This antibody can be used between 1-10 µg/mL. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

**Purity:** Greater than 90%, as determined by SDS-PAGE.

**Aggregation:** Less than 10%, as determined by HPLC.

**Filtration:** 0.2 µm post-manufacturing filtered.

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**Background/Target Information**

Recently, a novel member of the leukocyte receptor complex (LRC)-encoded family has been identified that is expressed specifically in osteoclast (OC). This protein names OC-associated receptor or OSCAR, play critical roles in the regulation of both innate and adaptive immune responses and bone-specific regulator of OC differentiation. Osteoclasts are multINEUTLED cells that resorb bone and are essential for bone homeostasis. This protein family plays critical roles in the regulation of both innate and adaptive immune responses. Different from the other LRC members, OSCAR expression is detected specifically in preosteoclasts or mature osteoclasts. OSCAR may be an important bone-specific regulator of osteoclast differentiation. Multiple alternatively spliced transcript variants encoding different isoforms have been found for this gene.
FOXJ1 Antibody (14-9965-82) in IHC (P)
Immunohistochemistry of paraffin-embedded mouse lung tissue with Anti-Human/Mouse FOXJ1 Purified followed by Anti-Mouse IgG Biotin (Product # 13-4013-85) and Avidin HRP (Product # 18-4100-51) (right). Data provided courtesy of Steven L. Brody.

FOXJ1 Antibody (14-9965-82) in IB
Immunoblotting of mouse tracheal epithelial cells at a 1:500 dilution of Anti-Human/Mouse FOXJ1 Purified. Bands were visualized using Anti-Mouse IgG HRP.
### 1 Immunofluorescence References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouse / 1:500</td>
<td>14-9965 was used in Immunofluorescence to show that airway epithelial cells can dedifferentiate into stable and functional stem cells, suggesting that they could be used for tissue regeneration.</td>
</tr>
</tbody>
</table>

*Nature (Nov 2013; 503: 218)*  
"Dedifferentiation of committed epithelial cells into stem cells in vivo."  
PubMed Article URL: [http://dx.doi.org/10.1038/12777](http://dx.doi.org/10.1038/12777)

### 3 Miscellaneous PubMed References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
</table>
| Not Applicable / Not Cited | Nature genetics (Dec 2008; 40: 1445)  
"Foxj1 transcription factors are master regulators of the motile ciliogenic program."  
Author(s): Yu X, Ng CP, Habacher H, Roy S  
PubMed Article URL: [http://dx.doi.org/10.1038/ng.263](http://dx.doi.org/10.1038/ng.263) |
"Restraint of B cell activation by Foxj1-mediated antagonism of NF-kappa B and IL-6."  
Author(s): Lin L, Brody SL, Peng SL  
PubMed Article URL: [http://dx.doi.org/null](http://dx.doi.org/null) |
"Foxj1 transcription factors are master regulators of the motile ciliogenic program."  
Author(s): Yu X, Ng CP, Habacher H, Roy S  
PubMed Article URL: [http://dx.doi.org/10.1038/ng.263](http://dx.doi.org/10.1038/ng.263) |

### 1 Western Blot References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
<th>Summary</th>
</tr>
</thead>
</table>
| Not Applicable / Not Cited | Journal of cell science (Jun 2007; 120: 1868)  
"RhoA-mediated apical actin enrichment is required for ciliogenesis and promoted by Foxj1."  
Author(s): Pan J, You Y, Huang T, Brody SL  
PubMed Article URL: [http://dx.doi.org/10.1242/jcs.005306](http://dx.doi.org/10.1242/jcs.005306) |